

#18

SEQUENCE LISTING



<110> SHORT, JAY M.  
DJAVAKHISHVILI, TSOTNE D.  
FREY, GERHARD J.

<120> EXONUCLEASE-MEDIATED NUCLEIC ACID REASSEMBLY IN  
DIRECTED EVOLUTION

<130> DIV-1460-21

<140> 10/029,221  
<141> 2001-12-21

<150> 60/008,311  
<151> 1995-12-07

<150> 60/008,316  
<151> 1995-12-07

<160> 13

<170> PatentIn Ver. 2.1

<210> 1  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Illustrative  
restriction enzyme recognition site

---

<220>  
<221> modified\_base  
<222> (7)..(22)  
<223> a, t, c or g; this range may encompass 14 or 16 nucleotides

<400> 1  
ctgaagnnnn nnnnnnnnnn nn 22

<210> 2  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Linker peptide

<400> 2  
Gly Gly Gly Gly Ser  
1 5

<210> 3  
<211> 15

```
<212> PRT
<213> Artificial Sequence
```

<220>  
<223> Description of Artificial Sequence: Linker peptide

<400> 3  
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser  
1 5 10 15

```
<210> 4
<211> 10
<212> DNA
<213> Artificial Sequence
```

<220>  
<223> Description of Artificial Sequence: Illustrative  
restriction enzyme recognition site

```
<220>
<221> modified_base
<222> (6)..(10)
<223> a, t, c or g
```

```
<400> 4
gagtcnnnnn
```

10

```
<210> 5
<211> 10
<212> DNA
<213> Artificial Sequence
```

<220>  
<223> Description of Artificial Sequence: Illustrative  
restriction enzyme recognition site

<400> 5  
cgcgctggac

10

```
<210> 6
<211> 223
<212> DNA
<213> Artificial Sequence
```

<220>  
<223> Description of Artificial Sequence: Formula  
sequence

```
<220>
<221> modified_base
<222> (1)..(10)
<223> a, t, c or g; this range may encompass 1-10 nucleotides
```

```
<220>
<221> modified base
```

<222> (21)..(120)  
 <223> a, t, c or g; this range may encompass 1-100 nucleotides

<220>  
 <221> modified\_base  
 <222> (124)..(223)  
 <223> a, t, c or g; this range may encompass 0-100 nucleotides

<400> 6  
 nnnnnnnnnn aagggaggag nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 60  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 120  
 atgnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 180  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnn 223

<210> 7  
 <211> 215  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Formula  
 sequence

<220>  
 <221> modified\_base  
 <222> (1)..(10)  
 <223> a, t, c or g; this range may encompass 1-10 nucleotides

<220>  
 <221> modified\_base  
 <222> (16)..(115)  
 <223> a, t, c or g; this range may encompass 1-100 nucleotides

<220>  
 <221> modified\_base  
 <222> (116)..(215)  
 <223> a, t, c or g; this range may encompass 0-100 nucleotides

<400> 7  
 nnnnnnnnnn aagggnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 60  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 120  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 180  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnn 215

<210> 8  
 <211> 123  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<220>  
 <221> modified\_base

<222> (24)..(123)

<223> a, t, c or g; this range may encompass 10-100 nucleotides

<400> 8

ctagaagaga ggagaaaacc atgnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 60  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 120  
nnn 123

<210> 9

<211> 121

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<220>

<221> modified\_base

<222> (22)..(121)

<223> a, t, c or g; this range may encompass 10-100 nucleotides

<400> 9

gatcaaaggc ggcctgcag gnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 60  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 120  
n 121

<210> 10

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 10

ctagaaggga ggagaaaacc atg 23

<210> 11

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 11

gatcaaaggc ggcctgcag g 21

<210> 12

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 12

ctagaaggga ggagaattac atgaagcggc ttttagccc

39

<210> 13

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 13

agctaagggt caaggccgca cccgagg

27